

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Hui-Ju Wu on June 6, 2009.

The application has been amended as follows:

At page 3, after line 13 and before line 14, the following text has been inserted:

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows the various synthetic pathways for the biosynthesis of DHA (docosahexaenoic acid).

Figure 2 shows the sequence comparison of the $\Delta 4$ -desaturases from *Euglena gracilis* and *Thraustochytrium* (WO 200226946). The two sequences show 35% identity [CLUSTAL W(1.60) multiple sequence alignment].

Figure 3 shows the sequence comparison (GAP alignment) of the $\Delta 4$ -desaturases from *Euglena gracilis* and *Thraustochytrium* (WO 200226946).

Figure 4 shows the GC analyses of yeast cells fed with DPA (docosapentaenoic acid). Control: yeast cells without $\Delta 4$ -desaturase [A], conversion to DHA in cells having the $\Delta 4$ -desaturase (pYES-EGD4-2) [B].

Figure 5 shows the position analysis of $\Delta 4$ -desaturated fatty acids. 16:1 $\Delta 7$ and 22:4 $\Delta 7,10,13,16$ were used for feeding. Conversion is stated in percent.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth F. McElwain whose telephone number is (571) 272-0802. The examiner can normally be reached on increased flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EFM

/Elizabeth F. McElwain/
Primary Examiner, Art Unit 1638